WE CLAIM:

1.   A method of protecting a lightpath segment in a mesh, wavelength division multiplexed (WDM) communications network wherein said mesh WDM network has multiple lightpath segments, the method comprising: providing a protection path for a selected one of said lightpath segments.

2.   The method as defined in claim 1 wherein said protection path employs a dedicated wavelength.

3.   The method as defined in claim 1 wherein each lightpath segment has a network element at each end thereof, said respective network elements coordinating a switch over from a working path to said protection path.

4.   The method as defined in claim 3 wherein said switch over is completed in response to instruction received from a network management system (NMS).

5.   The method as defined in claim 3 wherein said switch over is completed in response to a failure in said working path.

6.   The method as defined in claim 4 wherein said network management system controls functionality of said communications network.

7.   The method as defined in claim 6 wherein said NMS functions to establish said protection path.

8.   The method as defined in claim 6 wherein said NMS monitors status of said protection path.

9.   The method as defined in claim 6 wherein said NMS provides an operator with a graphical interface to monitor routing of said protection path.

10.   A method of protecting multiple lightpath segments in a mesh, wavelength division multiplexed (WDM) communications network wherein said mesh WDM network has multiple lightpath segments, the method comprising providing multiple protection paths for one or more of said multiple light path segments.

11.   The method as defined in claim 10 wherein said multiple protection paths employ a shared wavelength.

12.   The method as defined in claim 10 wherein each lightpath segment has a network element at each end thereof, said respective network elements coordinating a switch over from a working path to one of said multiple protection paths.

13.   The method as defined in claim 12 wherein said switch over is completed in response to instruction received from a network management system (NMS).

14.   The method as defined in claim 12 wherein said switch over is completed in response to a failure in said working path.

15.   The method as defined in claim 13 wherein said network management system controls functionality of said communications network.

16.   The method as defined in claim 15 wherein said NMS functions to establish said one or more protection paths.

17.   The method as defined in claim 15 wherein said NMS monitors status of each of said one or more protection paths.

18.   The method as defined in claim 15 wherein said NMS provides an operator with a graphical interface to monitor routing of said one or more protection paths.